

**COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Southwest Regional Office**

STATEMENT OF LEGAL AND FACTUAL BASIS

Merillat LP – Plant 14
Atkins, Smyth County, Virginia
Permit No. SWRO11075

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Merillat LP has applied for a Title V Operating Permit for its Atkins, Virginia (Plant 14) facility. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

Engineer/Permit Contact: _____

Date: _____

Air Permit Manager: _____

Date: _____

Deputy Regional Director: _____

Date: _____

FACILITY INFORMATION

Permittee
Merillat LP
P.O. Box 259
Atkins, Virginia 24311

Facility
Merillat LP – Plant 14
State Route 686
Atkins, Virginia 24311

County-Plant Identification Number: 51-173-00095

SOURCE DESCRIPTION

NAICS Code: NAICS 337110 – The facility includes wood cabinet component and wood panel manufacturing operations. The operations consist of woodworking equipment, dust collection equipment, gluing operations, and finishing operations. The facility also includes two natural gas/distillate oil-fired boilers for process and space heating.

The facility is a Title V major source of VOC and hazardous air pollutants (HAP). This source is located in an attainment area for all pollutants, and is a PSD minor source. The facility was previously permitted under a Minor NSR Permit issued on March 27, 2006, and amended on July 25, 2006.

COMPLIANCE STATUS

A full compliance evaluation of this facility, including a site visit, has been conducted. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance. Based on these compliance evaluations, the facility and DEQ have entered into a Consent Order to resolve a Notice of Violation on May 4, 2006 alleging noncompliance with recordkeeping and semiannual reporting associated with MACT JJ - National Emission Standards for Furniture Manufacturing Operations.

EMISSIONS INVENTORY

Emissions from the facility are summarized in the following tables.

2005 Actual Emissions

Emission Unit	2005 Criteria Pollutant Emission in Tons/Year				
	VOC	CO	SO ₂	PM ₁₀	NO _x
BLR1 & BLR2	0.05	0.69	----	0.06	0.83
W1	----	----	----	8.03	----
G1	0.34	----	----	----	----
F1	149.66	----	----	2.49	----
Total	150.05	0.69	----	10.58	0.83

2005 Facility Hazardous Air Pollutant Emissions

Pollutant	2005 Hazardous Air Pollutant Emission in Tons/Yr
HAPs	8.73

EMISSION UNIT APPLICABLE REQUIREMENTS – Industrial Boiler Co. and Hurst boilers (BLR1 & BLR2)

Limitations

The following limitations are state BACT requirements from Conditions 7, 8, 9, 13, 17, 20, 23, and 24 of the Minor NSR permit issued on March 27, 2006 as amended July 25, 2006:

Condition 7 limits approved fuels to distillate oil and natural gas for each unit.

Condition 8 limits the sulfur content of distillate oil to 0.5% demonstrated by fuel analysis records.

Condition 9 requires that the Industrial Boiler Company unit complies with 40 CFR 60 Subpart Dc.

Condition 13 limits No. 2 oil consumption by both units to 436,800 gallons per year.

Condition 17 limits total emissions from the two units to:

POLLUTANT	EMISSION LIMIT	
	lb/hr	T/yr
Particulate Matter	0.26	0.6
PM10	0.13	0.6
Sulfur Dioxide	9.11	15.7
Nitrogen Oxides	2.57	7.5
Carbon Monoxide	1.44	6.3
VOC	0.09	0.4

Condition 20 limits visible emissions from the boiler common stack to 10% opacity.

Condition 23 requires the company to keep records of gas usage, distillate oil shipments, maintenance, and operator training.

Condition 24 requires the company to allow for testing or monitoring if required.

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

9 VAC 5-60-100 makes reference to 40 CFR 63, Subpart DDDDD – National Emissions Standards for Hazardous Air Pollutants: Industrial, Commercial, and Institutional Boilers and Process Heaters, which applies to these units. However, because the Hurst unit is a firetube unit and is less than 10 MMBtu/hr heat input, it is considered a small unit and has no requirements. Likewise, the Industrial Boiler Company unit is an existing gas/liquid-fired firetube unit that has no applicable requirements beyond initial notification (already submitted).

9 VAC 5-50-410 references 40 CFR 60, Subpart Dc – New Source Performance Standards: Small Industrial-Commercial-Institutional Steam Generating Units, which applies to the Industrial Boiler Company unit (applies to units with input heat capacity \geq 10 MMBtu/hr).

9 VAC 5 Chapter 40, Article 8 includes emission limitations for existing fuel burning units. In the absence of Chapter 50 standards, the emission standards of Chapter 40 apply to new units. (See Streamlining Requirements discussion below)

Monitoring

Because the two units are fired with natural gas or distillate oil, the monitoring and recordkeeping requirements in Condition 23 of the NSR permit are considered sufficient to meet periodic monitoring requirements. Emissions limits were established based on the allowable use of distillate oil combined with a maximum use of natural gas for the remainder of the boiler operating schedules. Therefore, compliance with the emission limits is expected as long as distillate oil usage remains below the corresponding consumption limitation.

Recordkeeping

The permit includes requirements for maintaining records of all monitoring and testing required by the permit. These records include annual natural gas consumption and shipments of distillate oil purchased along with fuel analysis.

Testing

The permit does not require source tests. A table of test methods has been included in the permit if testing is performed. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

The company already submitted initial notification for MACT DDDDD applicability. The company is required to submit semi-annual reports of distillate oil received and fuel quality information. No other reporting is proposed.

Streamlined Requirements

9 VAC 5-40-900 and -930 contain particulate matter and sulfur dioxide standards for existing fuel burning equipment units. Standards for new units must be at least as stringent as these standards. Since emission limits for the two boilers were established as BACT requirements using more recent emission factor information, and since the units combust only natural gas and distillate oil, the emission limits in the current NSR permit are more stringent than Chapter 40 requirements. Therefore, only those limits in the NSR permit will transfer to the Title V permit.

EMISSION UNIT APPLICABLE REQUIREMENTS – Woodworking Operations (W1)

Limitations

The following limitations are state BACT requirements from Conditions 3, 6, 14, 16, 19, 23, and 24 of the Minor NSR permit issued on March 27, 2006 as amended July 25, 2006:

Condition 3 requires that particulate matter emissions be controlled by two baghouses.

Condition 6 requires that fugitive dust emissions from material handling be controlled by enclosure, wet suppression, or equivalent.

Condition 14 limits lumber throughput to 18,330 tons per year.

Condition 16 limits emissions to:

POLLUTANT	EMISSION LIMIT		
	gr/dscf	lb/hr	T/yr
Particulate Matter	0.01	7.76	34.0
PM10	0.01	7.76	34.0

Condition 19 limits opacity from the baghouse exhausts to 5%.

Condition 23 requires records of lumber throughput.

Condition 24 requires the company to allow for testing or monitoring if required.

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

9 VAC 5-50-80, Standard for Visible Emissions, requires 20% opacity.
(See Streamlined Requirements discussion below)

9 VAC 5-50-90, Standard for Fugitive Dust, requires that reasonable means be used to reduce fugitive dust.

9 VAC 5-40-2250, Emission Standards for Woodworking Operations (Rule 4-17).
(See Streamlined Requirements discussion below)

Monitoring

The monitoring and recordkeeping requirements in Condition 23 of the NSR permit have been modified to meet Part 70 requirements.

If visible emissions are seen from a woodworking stack, it is reasonable to assume that there is a problem with one of the control devices. The woodworking equipment in operation is required to meet a particulate matter emission limitation of 0.01 gr/dscf. Emission limits are based on this requirement. As long as the particulate emissions are vented through a properly operating control device, the standard is easily attained. If visible emissions are observed from the fabric filter exhausts, there is high probability that a maintenance problem exists. The company will be required to conduct weekly visible emission observations of the fabric filter exhausts to determine the presence of visible emissions. If visible emissions are observed, corrective action must be taken.

The company will maintain records of lumber throughput to the woodworking equipment in order to estimate particulate matter emissions. As long as the throughput limits are met and control

devices maintained, emissions are not expected to approach the permitted emission limits. In previous permit analyses, an emission factor of 1,330 pounds of saw dust per ton of lumber throughput and 99.9% control by fabric filters was used. Using these figures, maximum emissions may be estimated:

$$(18,330 \text{ T/yr})(1330 \text{ lb/T})(1-0.999)(1 \text{ T}/2000 \text{ lb}) = 12.2 \text{ T/yr}$$

It becomes clear that the emission limits cannot be exceeded as long as throughput limits are respected, and control equipment is properly maintained and operated.

In accordance with the fugitive dust requirements, the company is required to cover all conveyors that are used for the collection and transfer of collected sawdust and shavings.

Compliance Assurance Monitoring

According to 40 CFR 64.2, the woodworking operations controlled by baghouses are potentially subject to CAM requirements: the units are subject to an emission limitation; the particulate matter emissions are controlled; and pre-control emissions of particulate matter could exceed the major source threshold of 100 tons per year. However, according to 40 CFR 64.5(b), pollutant specific emission units other than "large" units are not required to be included in the CAM plan until renewal of a Title V permit. Therefore, CAM is not a subject of this Title V permit.

Recordkeeping

The permit includes requirements for maintaining records of all monitoring and testing required by the permit. These records include monthly and annual lumber throughput, weekly visible emissions observations, and annual inspection results.

Testing

The permit does not require source tests. A table of test methods has been included in the permit if testing is performed. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

Deviations from permit requirements will be included in the semi-annual monitoring report required in the General Conditions of this permit.

Streamlined Requirements

9 VAC 5-50-80, Standard for Visible Emissions, requires 20% opacity for sources of visible emissions. However, the NSR permit requires that visible emissions from baghouse exhausts meet 5% opacity. Since the permit requirements are more stringent than those of 9 VAC 5-50-

80, streamlining is appropriate. The Title V permit will contain 5% opacity requirements.

9 VAC 5-40-2250, Emission Standards for Woodworking Operations (Rule 4-17), requires that woodworking operations be equipped with collectors and that particulate matter emissions meet 0.05 grains per dry standard cubic feet of exhaust gas. The baghouse collectors are required to meet a more stringent emission limit (0.01 gr/dscf) according to the terms of the NSR permit. Therefore, streamlining is appropriate, and the Title V permit will contain the 0.01 gr/dscf requirements.

EMISSION UNIT APPLICABLE REQUIREMENTS – Gluing Operations (G1)

Limitations

The following limitations are state BACT requirements from Conditions 10, 15, 23, and 24 of the Minor NSR permit issued on March 27, 2006 as amended July 25, 2006:

Condition 10 limits glue consumption to 266 pounds per hour and 746.9 tons per year.

Condition 15 limits VOC emissions from gluing operations to 2.66 pounds per hour and 7.5 tons per year.

Condition 23 requires the company to keep hourly, monthly, and annual records of adhesive throughput, and MSDS information.

Condition 24 requires the company to allow for testing or monitoring if required.

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

9 VAC 5-60-100 makes reference to 40 CFR 63, Subpart DDDD - National Emissions Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products. The panel construction operation includes glue (polyvinyl acetate) application equipment. The only requirements that apply, however, involve the initial notification, which has already been submitted by the company.

Monitoring & Recordkeeping

The monitoring and recordkeeping requirements in Condition 23 of the NSR permit have been modified to meet Part 70 requirements. The company will maintain records of MSDS information for adhesives applied. In addition, the company will maintain records of VOC estimates from the gluing operations based on 1wt% of the glue being emitted as VOC.

Testing

The permit does not require source tests. A table of test methods has been included in the permit if testing is performed. The Department and EPA have authority to require testing not

included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

No specific reporting requirements are proposed for this operation.

Streamlined Requirements

No streamlining is proposed for this operation.

EMISSION UNIT APPLICABLE REQUIREMENTS – Finishing Operations (F1)

Limitations

The following limitations are state BACT requirements from Conditions 4, 5, 6, 11, 12, 18, 21, 23, and 24 of the Minor NSR permit issued on March 27, 2006 as amended July 25, 2006:

Condition 4 requires that particulate matter emissions from sanding and brushing associated with finishing be controlled by cartridge filters.

Condition 5 requires that particulate matter emissions from spray booths be controlled by fiberglass filters.

Condition 6 requires that the company take precautionary measures to reduce fugitive VOC emissions.

Condition 11 limits VOC consumption to no more than 240 tons per year.

Condition 12 limits finishing material consumption to no more than 48 gallons per hour and 120,000 gallons per year.

Condition 18 limits emissions from the finishing operations to no more than:

POLLUTANT	EMISSION LIMIT	
	lb/hr	T/yr
Particulate Matter/PM10	4.8	6.0
VOC	288	240

Condition 21 limits visible emissions from the spray booth exhausts to no more than 5% opacity.

Condition 23 requires the company to keep hourly, monthly, and annual records of finishing material throughput, MSDS information, and monthly and annual VOC and particulate matter emissions estimates.

Condition 24 requires the company to allow for testing or monitoring if required.

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

9 VAC 5-60-100, National Emission Standards for Hazardous Air Pollutants: Wood Furniture Manufacturing Operations - 40 CFR 63.800 - 819.

9 VAC 5-50-80 and 290, New Source Standard for Visible Emissions.
(See Streamlining discussion)

Monitoring

The monitoring and recordkeeping requirements in Condition 23 of the NSR permit have been modified to meet Part 70 requirements.

The permit requires use of fiberglass filters on spray booths to demonstrate compliance with the visible emission requirements. A properly operating filter can comply with the 5% opacity limit. The permittee will be required to perform weekly visible emission observations of each spray booth exhaust. If visible emissions are present, timely corrective action must be taken such that no visible emissions are present, or a six-minute visible emission evaluation (VEE) must be performed according to 40 CFR 60, Appendix A, Method 9. If during the six-minute period, any violations of the 5% opacity standard are noted, a 60-minute VEE is required to demonstrate compliance with the standard. Weekly observations will satisfy the periodic monitoring requirement for the visible emission limitation. Frequent checks for visible emissions will indicate malfunctions of the control equipment. As long as the control equipment is operating properly, there is little likelihood of violating the visible emission limitation.

The Title V permit includes a requirement to monitor and record the hourly, monthly, and annual emissions of particulate matter and VOC, based on material balance, and the number of hours per month of operation. The VOC content of each coating material will be determined using appropriate EPA test methods (Method 24). Material safety data sheets (MSDS) or certified product data sheets (CPDS) may be relied upon provided the information contained therein is determined using approved EPA test methods. The company is also responsible for the monitoring requirements of the Wood Furniture MACT (see Facility-wide requirements).

Recordkeeping

The permit includes requirements for maintaining records of all monitoring and testing required by the permit. These records include the hourly, monthly and annual throughput of particulate matter and VOC. Also, the company will record the results of the weekly emissions observations.

Records are also required for scheduled and non-scheduled maintenance on the air pollution control equipment and training of operators of the equipment to include names of trainees, date of training, and nature of training.

The weekly observations and recordkeeping required by the permit will satisfy the periodic

monitoring requirement for the spray booths. Recordkeeping requirements of the MACT are given in the Facility-wide requirements.

Testing

The permit does not require source tests. A table of test methods has been included in the permit if testing is performed. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

Monitoring excursions as described above will be included in the semi-annual monitoring report required in the General Conditions of this permit.

Streamlined Requirements

9 VAC 5-50-80, Standard for Visible Emissions, requires 20% opacity for sources of visible emissions. However, the NSR permit requires that visible emissions from spray booth exhausts meet 5% opacity. Since the permit requirements are more stringent than those of 9 VAC 5-50-80, streamlining is appropriate. The Title V permit will contain 5% opacity requirements.

FACILITY - WIDE APPLICABLE REQUIREMENTS

Limitations

The permittee is subject to the 40 CFR 63 Subpart JJ, National Emission Standards for Wood Furniture Manufacturing Operations (Wood Furniture MACT). All applicable limitations from the Wood Furniture MACT have been included in the permit. The permittee is also subject to 40 CFR 63 Subpart A, General Provisions. Applicable limitations from the general provisions have also been included in the permit.

The boilers at the facility are affected sources according to 40 CFR Subpart DDDDD (§63.7490(a)), National Emissions Standards for Hazardous Air Pollutants: Industrial, Commercial, and Institutional Boilers and Process Heaters. Even though there are no requirements for fire tube boilers, the MACT will be cited as technically applicable.

Likewise, panel construction equipment involving gluing panels together may be considered subject to 40 CFR Subpart DDDD (§63.2231(a)), National Emissions Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products. The only requirements that apply, however, involve the initial notification, which has already been submitted by the company. This MACT will also be cited as technically applicable.

Monitoring

The Wood Furniture MACT contains requirements for continuous compliance, including monthly and/or daily recordkeeping depending on the method of compliance. These requirements have

been incorporated in the permit. The Wood Furniture MACT contains adequate monitoring to meet the periodic monitoring requirements, so no additional monitoring has been incorporated into the Title V permit.

Recordkeeping

The Wood Furniture MACT contains requirements for recordkeeping that include maintaining certified product data sheets for each material used and all calculations used to demonstrate continuous compliance. No additional recordkeeping has been included in the Title V permit.

Testing

The permit does not require source tests. The Department and EPA have the authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

The Wood Furniture MACT requires that a source demonstrate continuous compliance and submit monitoring results semi-annually. Because the company submits other Title V and State-required reports, it requested that the reporting timeframes and submission dates be consolidated for all MACT, Title V, and State-required reports.

Altering submission dates and reporting/recordkeeping timeframes is allowed according to 40 CFR 63.9(i) and 63.10(a)(5), as long as the State has appropriate delegated authority and the proper notifications/approvals are sought. The company made a written request, and DEQ responded with an approval that was forwarded to EPA.

The dates for the monitoring reports have now been adjusted to coincide with the semi-annual compliance reports. The semi-annual compliance and monitoring reports are due on March 1 and September 1, covering the periods January 1 to June 30 and July 1 to December 31, respectively.

Streamlined Requirements

The initial notification requirements associated with the Wood Furniture MACT have not been included in the permit because the source has already completed the notifications.

The permittee has opted not to use a control device to meet the MACT requirements. Therefore, all requirements regarding a control device have not been included in the permit.

GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110 that apply to all Federal-operating permitted sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also

requires notification of deviations from permit requirements or any excess emissions.

Comments on General Conditions

B. Permit Expiration

This condition refers to the Board taking action on a permit application. The Board is the State Air Pollution Control Board. The authority to take action on permit application(s) has been delegated to the Regions as allowed by §2.1-20.01:2 and §10.1-1185 of the *Code of Virginia*, and the “Department of Environmental Quality Agency Policy Statement No. 2-2003”.

This general condition cites the sections that follow:

- 9 VAC 5-80-80. Application.
- 9 VAC 5-80-140. Permit Shield.
- 9 VAC 5-80-150. Action on Permit Applications.

F. Failure/Malfunction Reporting

Section 9 VAC 5-20-180 requires malfunction and excess emission reporting within four hours of discovery. Section 9 VAC 5-80-250 of the Title V regulations also requires malfunction reporting; however, reporting is required within two days. Section 9 VAC 5-20-180 is from the general regulations. All affected facilities are subject to section 9 VAC 5-20-180 including Title V facilities. Section 9 VAC 5-80-250 is from the Title V regulations. Title V facilities are subject to both sections. A facility may make a single report that meets the requirements of 9 VAC 5-20-180 and 9 VAC 5-80-250. The report must be made within four daytime business hours of discovery of the malfunction.

This general condition cites the sections that follow:

- 9 VAC 5-40-50. Notification, Records and Reporting.
- 9 VAC 5-50-50. Notification, Records and Reporting.

J. Permit Modification

This general condition cites the sections that follow:

- 9 VAC 5-80-50. Applicability, Federal Operating Permit For Stationary Sources.
- 9 VAC 5-80-190. Changes to Permits.
- 9 VAC 5-80-260. Enforcement.
- 9 VAC 5-80-1100. Applicability, Permits For New and Modified Stationary Sources.
- 9 VAC 5-80-1790. Applicability, Permits For Major Stationary Sources and Modifications Located in Prevention of Significant Deterioration Areas.
- 9 VAC 5-80-2000. Applicability, Permits for Major Stationary Sources and Major Modifications Locating in Nonattainment Areas.

U. Malfunction as an Affirmative Defense

The regulations contain two reporting requirements for malfunctions that coincide. The reporting requirements are listed in sections 9 VAC 5-80-250 and 9 VAC 5-20-180. The malfunction requirements are listed in General Condition U and General Condition F. For further explanation see the comments on general condition F.

This general condition cites the sections that follow:

9 VAC 5-20-180. Facility and Control Equipment Maintenance or Malfunction.
9 VAC 5-80-110. Permit Content.

Y. Asbestos Requirements

The Virginia Department of Labor and Industry under Section 40.1-51.20 of the Code of Virginia also holds authority to enforce 40 CFR 61 Subpart M, National Emission Standards for Asbestos.

This general condition contains a citation from the Code of Federal Regulations that follows:
40 CFR 61.145, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to demolition and renovation.
40 CFR 61.148, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to insulating materials.
40 CFR 61.150, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to waste disposal.

STATE ONLY APPLICABLE REQUIREMENTS

The following Virginia Administrative Code has specific requirements only enforceable by the State and have been identified as applicable by the applicant:

9 VAC 5-50-310, Odorous Emissions.

These requirements will not be included in the Title V permit.

FUTURE APPLICABLE REQUIREMENTS

No future applicable requirements were identified by the company.

INAPPLICABLE REQUIREMENTS

The company did not identify inapplicable requirements.

INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the

Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

Insignificant emission units include the following:

Emission Unit No.	Emission Unit Description	Citation ¹ (9 VAC_)	Pollutant Emitted (5-80-720 B.)	Rated Capacity (5-80-720 C.)
PW1	Parts Washer	----	VOC	----
STs	3 Storage Tanks	----	VOC	----
GHs	Gas Heaters	----	----	0.03 MMBtu/hr
TB1, TB2	Triad Boilers/Hot Water Heaters	----	----	0.02 MMBtu/hr

¹The citation criteria for insignificant activities are as follows:

9 VAC 5-80-720 A - Listed Insignificant Activity, Not Included in Permit Application

9 VAC 5-80-720 B - Insignificant due to emission levels

9 VAC 5-80-720 C - Insignificant due to size or production rate

CONFIDENTIAL INFORMATION

The permittee did not submit a request for confidentiality. All portions of the Title V application are suitable for public review.

PUBLIC PARTICIPATION

The proposed permit was placed on public notice in the *Smyth County News & Messenger* from October 8, 2006 to November 7, 2006. No comments were received from affected states or the public. In addition, EPA review continued through November 22, 2006. No comments were received from EPA.